FILE 2-12
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SUMMARY OF A-12/SR-71 ACCIDENTS

I. Aircraft S/N 123 (A-12)

A. Date: 26 May 1963

25X1A B. Pilot: [redacted] Project Pilot

C. Location: 14 NM south - southwest of Wendover, Utah. Aircraft totally disintegrated and destroyed on impact.

D. Findings: (Primary Cause) The primary cause of this accident was materiel failure in that the total pressure ports of the pitot system probably became blocked by ice, which gave the pilot false increased airspeed and Mach readings on both the TDI and conventional indicated airspeed system, this was followed by unplugging which caused rapid rundown of Mach and KEAS back to correct readings at approximately 160 KEAS, further confusing the pilot. NOTE: This pitot heating system was designed and qualified in accordance with MIL-P-25632A.

E. Findings: (Contributing Causes):

1. The pilot failed to comply with briefing instructions that he abort this mission if he encountered IFR conditions and/or any undercast that would prevent visual observations for the INS and V/H sensor.

2. The Mach Trim subsystem of the AFCS, receiving the same erroneous Mach signals as the TDI, added nose up trim to the aircraft, thus further increasing the angle of attack and increasing the rate of air-speed bleed off which led to the stall.

3. Pilot failed to take adequate corrective action after evaluation of instrument readings.
4. Weather contributed to this accident in that pitot icing most probably occurred when flying thru visible moisture just prior to the turn at Wendover, and instrument conditions existed during the final phase of flight.
5. There is no alternate pitot-static source which the pilot could have used to check instrument readings.
6. The F-101B aircraft was unable to provide chase support during the critical time the A-12 was experiencing pitot-static difficulty and airspeed was bleeding down, due totthe wide margin in sub-sonic flight performance between the two aircraft.

F. Pilot Status: Successfully ejected at approximately 36,000 feet. Only injuries sustained were a mild back soreness.

II. Aircraft S/N 133 (A-12)

A. Date: 9 July 1964

25X1A B. Pilot: [redacted] LAC Test Pilot

25X1A C. Location: [redacted] (approach end of runway- approximately 1 mile) Aircraft was totally destroyed.

D. Findings: (Primary Cause)

1. The primary cause of this accident was that the outboard elevon servo valve stuck in the partially open position causing the right outboard elevon to gradually move to the full down position. This imparted more left roll to the aircraft than could be overcome by the pilot. The sticking of this valve resulted from the combination of three conditions; warpage of the valve incurred in operational use, a temperature shock condition due to a rapid change in flight conditions and metal particles within the servo valve probably accumulated during manufacture.

2. The designed clearance between the metering spool and the valve body of the servo units is necessarily small accentuating the consequences of contamination, manufacturing tolerances, temperature changes, or other outside influences. This fact coupled with the relatively light force capable of being exerted by the elevon mechanical transmission system (136 lbs)

increases the possibility of a malfunction.

E. Additional Findings not Contributing to the Accident:

1. The flight recorder was destroyed on impact. In addition it did not have a sufficient number of parameters to provide a meaningful and complete flight data history.

2. A-12 aircraft take-offs and landings were not being filmed.

3. After activation of the emergency oxygen system opening of the face visor of the pressure suit activated rapid flow of emergency oxygen about the pilots face creating a fire hazard.

F. Pilot Status: Successful ejection at approximately 200 feet. No injuries sustained, minimal muscular strain from ejection and parachute opening forces.

III. Aircraft S/N 126 (A-12)

A. Date: 28 December 1965

25X1A

B. Pilot: [redacted] Project Pilot

25X1A

C. Location: [redacted] Aircraft destroyed, flying time 30 seconds.

D. Findings: (Primary Cause) Maintenance error. (Wiring for Yaw and Pitch rate gyros of the stability augmentation system was connected in reverse.)

E. Findings: (Contributing Causes)

1. Supervisory errors by electrical supervisor and inspector.

2. Design deficiency which made it possible to connect the Yaw and Pitch rate gyros in reverse.

F. Pilot Status: Successful ejection at approximately 150 - 200 feet above the ground. Injuries sustained - bruise on right hand and right foot from initial ground impact.

IV. Aircraft S/N 61-7952 (#2003) (SR-71)

A. Date: 25 January 1966

B. Crew: Pilot [redacted] (LAC Test Pilot)
25X1A
RSO- [redacted] LAC Engineer)

C. Location: Harding, New Mexico - 350°/107 NM, Cannon AFB
Aircraft totally destroyed and strewn over an area approximately 16 miles long and 5 miles wide.

D. Findings: (Primary Cause) Miscellaneous unsafe condition in that the aircraft was flown into a statically unstable regime in which a disturbance in the Pitch axis resulted in development of a Pitch rate which could not be controlled.

E. Findings: (Contributing Causes)
Probable- Pilot preoccupation caused by manual operation of engine inlet doors.

F. Crew Status:
Pilot - Forcibly ripped from seat through lap belt and shoulder harness by wind and pressure forces as aircraft disintegrated at approximately [redacted] 25X1A
25X1A [redacted] Injuries sustained - minor contusions and abrasions.
25X1A
RSO - Fatal ejection at approximately [redacted]
25X1A
[redacted] Manner in which seat was fired is unknown but once sequence began, all systems functioned in proper order. Injuries sustained - broken neck and hyperemia. Probably as a result of excessive G-forces when aircraft disintegrated and during ejection.